

REMARKS

Favorable reconsideration and withdrawal of the rejection as set forth in the above-mentioned Official Action in view of the foregoing amendments and the following remarks are respectfully requested.

Claim Status

Claims 13 through 26 are now pending in the application. Claims 1 through 12 have been cancelled. Claims 13 through 16 and 18 through 22 have been amended to even more succinctly define the invention, to place the claims in better form, and to be responsive to the Examiner's assertion at page 3 of the above-mentioned Official Action that patentability was being predicated on certain unclaimed features. Claims 23 through 26 have been presented to accord Applicants an additional scope of protection commensurate with the disclosure. It is respectfully submitted that no new matter has been added. Claims 13, 18, and 23 are the independent claims.

Art Rejection

Claims 13 through 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Perrone in view of Saitoh et al. The rationale underlying the rejection is succinctly set forth in the Official Action. The rejection respectfully is traversed.

Response to Rejection

Amended independent Claim 13 recites a sheet punching device, which cuts holes in a sheet conveyed at predetermined intervals while punches are entering die holes. The

sheet punching device includes: a plurality of punch trains, each of which includes a plurality of the punches axially aligned on a rotating shaft and projecting in a radial direction of the shaft. An initial position detecting sensor detects an initial position of each of the plurality of punch trains in a rotation direction of the shaft. The plurality of punch trains are disposed with a phase difference in the rotation direction of the shaft relative to one another. The die holes are disposed in correspondence with the plurality of punches, wherein one of the plurality of punch trains is selectively used in cutting holes in the sheet at a predetermined timing corresponding to sheet conveyance intervals, and wherein one of the plurality of punch trains selected for use, is set at the initial position based on signals from the initial position detecting sensor.

Amended independent Claim 18 also calls for a sheet punching device including a plurality of punch trains disposed on a first shaft and an initial position detecting sensor, which detects an initial position of each of the plurality of punch trains in a rotation direction of the first shaft.

Perrone discloses a die punching apparatus for cutting holes in a sheet. Hole-punching die members 42 and 44 are mounted in holes 60 and 62 corresponding to a selected hole pattern among the prepared holes 60 and 62 in rollers 16 and 18. Fig. 2 shows rollers 16 and 18 cutting holes in a sheet 34. The punch trains are located at two positions, which are out of phase by 180° in a rotation direction.

As noted by the Examiner, Perrone does not disclose a feature of an initial position detecting sensor, which detects an initial position of each of the plurality of punch trains in a rotation direction of the shaft. *A fortiori* Perrone does not disclose a feature that one of

the plurality of punch trains selected for use is set at the initial position based on signals from the initial position detecting sensor.

The Examiner relies on Saitoh, et al. for disclosing an initial position detecting sensor. Saitoh et al. discloses a hole punching means 60 in which after a sheet detection sensor 31 detects a trailing edge of the sheet, which is being conveyed, a punch driver motor 66 is driven with predetermined timing so that a pair of punch 61 and die 62 cuts holes in the sheet.

However, the hole punching means 60 disclosed by Saitoh et al. is provided with only one punch 61 and die 62 pair. Saitoh et al. does not disclose to selectively use one train of the plurality of punch trains to cut holes in the sheet. Although Saitoh et al. discloses an initial position detecting sensor, it is for preventing a deviation in a direction perpendicular to a sheet conveyance direction of the punching means 60. Applicants submit that the initial position detecting sensor of Saitoh et al. cannot set an initial position in a rotation direction as recited in amended Claims 13 and 18.

In view of the foregoing, it is respectfully submitted that independent Claims 13 and 18 are allowable over the Perrone and Saitoh et al. whether taken individually or in combination.

It is again submitted that the combination rejection is not well made. The Examiner has not provided any basis in the cited art for modifying the teachings of Perrone with the teachings of Saitoh et al. In the absence of such a basis in the cited art, it is respectfully submitted that the motivation to modify the teachings of the cited art must come from Applicants claims.

Newly-persecuted independent Claim 23 calls for a sheet punching device which cuts holes in a sheet conveyed at predetermined intervals while punches are entering die holes. The sheet punching device includes a plurality of punch trains, each of which includes a plurality of the punches axially aligned on a rotating shaft and projecting in a radial direction of the shaft. The plurality of punch trains are disposed with a phase difference in a rotation direction of the shaft relative to one another. The die holes are disposed in correspondence with the plurality of punches. Numbers of the plurality of punches in the plurality of punch trains are different from each other. One of the plurality of punch trains is selectively used in cutting holes in the sheet. After the sheet in which holes are cut by the one of the plurality of punch trains has passed, punches of another of the plurality of punch trains and die holes are engaged with one another during the predetermined intervals.

It is respectfully submitted that the cited art does not disclose or suggest a sheet punching device including a plurality of punch trains as recited in Claim 23.

Dependent Claims

Dependent Claims 17, 19 through 22, and 24 through 26 depend either directly or indirectly from one of the independent Claims 13, 18 and 23 and are allowable by virtue of their dependency and in their own right or further defining Applicants' invention.

Individual consideration of dependent claims is respectfully requested.

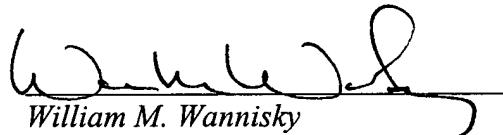
Conclusion

It is respectfully submitted that the claims on file are allowable over the art of record and the application is in condition for allowance.

Favorable reconsideration and early passage to issue of the present application are earnestly solicited.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our New York office at the address shown below.

Respectfully submitted,



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